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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/559,873	12/07/2005	Kotaro Hayashi	125460	2927
25944 7590 08/04/2009 OLIFF & BERRIDGE, PLC P.O. BOX 320850 ALEXANDRIA, VA 22320-4850				
EXAMINER				
NGUYEN, CAM N				
ART UNIT		PAPER NUMBER		
1793				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/559,873

Applicant(s)

HAYASHI, KOTARO

Examiner

Cam N. Nguyen

Art Unit

1793

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04/27/09 (an amendment/response).
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on originally filed is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. The amendment filed on 04/27/09 has been made of record and entered. Claims 1-2 have been amended. Claim 3 has been canceled. Claims 4-11 have been added. Specification paragraphs [0027], [0034], & [0036] have been amended.

Claims 1-2 & 4-11 are currently pending in this application.

Specification

2. The examiner has not checked the specification to the extent necessary to determine the presence of **all** possible minor errors (grammatical, typographical, and idiomatic). Cooperation of the applicant(s) is requested in correcting any errors of which applicant(s) may become aware of in the specification, in the claims and in any further amendment(s) that applicant(s) may file.

Applicant(s) is also requested to complete the status of the copending applications referred to in the specification by their Attorney Docket Number or Application Serial Number, **if any**.

The status of the parent application(s) and/or any other application(s) cross-referenced to this application, **if any**, should be updated in a timely manner.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are

such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

A. Claims 1-2 & 4-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura et al., hereinafter referred to as "*Nakamura '064*", (PG. Pub. US 2002/0091064 A1).

Nakamura '064 discloses a exhaust gas purifying catalyst comprising: a monolithic substrate; a first catalytic layer formed on said monolithic substrate, said first catalytic layer containing at least one noble metal selected from the group consisting of rhodium, platinum and palladium, compound of at least one metal selected from the group consisting of alkali metal, alkaline earth metal and rare earth metal, and alumina; and a second catalytic layer formed on said first catalytic layer and containing rhodium, at least one noble metal selected from the group consisting of platinum and palladium, compound of at least one metal selected from the group consisting of alkali metal, alkaline earth metal and rare earth metal, and alumina, a content of the compound of the at least one metal in said second catalytic layer being larger than that in said first catalytic layer (see page 8- page 9, claim 1).

Nakamura '064 does not disclose the concentration of the NOx storage material supported by the lower layer being higher than the concentration of the NOx storage material which is supported by the catalyst supporting layer.

However, it would have been *prima facie obvious* to one of ordinary skill in the art at the time the invention was made to have predetermined or optimized such NOx storage material (or the alkali metal, alkaline earth metal and rare earth metals) in the first and second catalytic layers of the Nakamura '064 catalyst in order to achieve an effective catalyst material because it is a result effective variable, in view of In re Boesch.

B. Claims 1-2 & 4-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brisley et al., hereinafter referred to as “*Brisley ‘483*”, (US Pat. 6,413,483 B1).

Brisley ‘483 discloses a catalytic converter for a lean-burn engine comprising a supported layered catalyst having a first layer containing platinum and potassium carried on a washcoat comprising at least two of alumina, ceria and zirconia, a second layer containing rhodium carried on a washcoat comprising ceria and zirconia, and an interlayer, disposed between the first layer and second layer; comprising a barium compound carried on a washcoat (see col. 4, claim 3).

Both the first layer and interlayer of the disclosed catalyst contain a NO_x storage material, which is a potassium and a barium compound. However, the reference does not disclose the concentration of the NO_x storage material supported by the lower layer being higher than the concentration of the NO_x storage material, which is supported by the catalyst supporting layer as being required by the instant claims 1 & 3.

It would have been *prima facie obvious* to one of ordinary skill in the art at the time the invention was made to have predetermined or optimized such NO_x storage materials (or potassium and barium compound) in the first layer and interlayer of the *Brisley ‘483* catalyst in order to achieve an effective catalyst material because it is a result effective variable, in view of *In re Boesch*.

Response to Applicants’ Arguments

4. The remarks filed on 04/27/09 have been fully considered, but not deemed persuasive for the following reasons.

Applicants' arguments regarding the concentration of the NO_x storage component contained in the lower layer and catalyst supporting layer have been noted. As Examiner

admitted in the office action that the applied references do not teach the claimed NOx storage component concentrations; however, it was considered obvious for a person having the ordinary skill in the art to optimize the NOx storage component concentrations in the lower layer and catalyst supporting layer of the disclosed catalysts because it is a result-effective variable, in view of *In re Boesch*. Applicants have not provided a good reason as to why a person having the ordinary skill in the art could not optimize such concentrations of the NOx storage component contained in the references. Currently, there is no comparative data provided or a showing of the difference in the concentration of the NOx storage component of the disclosed catalysts and the claimed catalyst and it is in fact changes the catalytic structure and characteristics of the claimed catalyst.

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

6. Claims 1-2 & 4-11 are pending. Claims 1-2 & 4-11 are rejected. No claims are allowed.

Contacts

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Primary Examiner CAM N. NGUYEN, whose telephone number is 571-272-1357. The examiner can normally be reached on M-F, 9:00 AM - 6:30 PM, at alternative work site.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman, can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-272-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Cam N. Nguyen/

Primary Examiner

Art Unit: 1793

/C. N. N./

July 31, 2009